

Claims

- [c1] 1.A sheet-fed press including an intermediate cylinder to convey a sheet, said intermediate cylinder comprising:
a main body;
a plurality of suction boxes formed in said main body at positions different with respect to a rotation axis of said main body;
a plurality of suction bores formed in said suction boxes so that they are open at an outer peripheral surface of said main body;
suction force generation means for generating suction force within said suction boxes;
switching means for selectively switching connections between said plurality of suction boxes and said suction force generation means; and
air jet means for jetting air toward an outer peripheral surface of said intermediate cylinder so that said sheet delivered to said intermediate cylinder is stretched along said outer peripheral surface.
- [c2] 2.The sheet-fed press as set forth in claim 1, wherein the jet of air by said air jet means is performed on the outer peripheral surface of said intermediate cylinder in

a range of 45 degrees, measured downward from a position where said sheet is received by said intermediate cylinder, with a rotation axis of said intermediate cylinder as center.

[c3] 3.The sheet-fed press as set forth in claim 1 wherein: a reverse-side printing unit and an obverse-side printing unit are arranged along a traveling path for said sheet; said reverse-side printing unit is operative to perform printing on the under side of said sheet being traveled; said obverse-side printing unit is operative to perform printing on the upper side of said sheet being traveled; and said intermediate cylinder is used between said reverse-side printing unit and said obverse-side printing unit.

[c4] 4.The sheet-fed press as set forth in claim 3, wherein said reverse-side printing unit and said obverse-side printing unit are arranged from the upstream side of the sheet traveling direction in the recited order.

[c5] 5.The sheet-fed press as set forth in claim 4, further comprising imaging means provided under said intermediate cylinder, said imaging means being operative to photograph the reverse side of said sheet to inspect printing quality of said reverse side.

[c6] 6.A sheet-fed press including an intermediate cylinder to convey a sheet, said intermediate cylinder comprising:
a main body;
a plurality of suction boxes formed in said main body at positions different with respect to a rotation axis of said main body;
a plurality of suction bores formed in said suction boxes so that they are open at an outer peripheral surface of said main body;
suction force generation means for generating suction force within said suction boxes;
switching means for selectively switching connections between said plurality of suction boxes and said suction force generation means;
an actuator connected to said switching means for actuating said switching means; and
air jet means for jetting air toward an outer peripheral surface of said intermediate cylinder so that said sheet delivered to said intermediate cylinder is stretched along said outer peripheral surface.

[c7] 7.The sheet-fed press as set forth in claim 6, wherein the jet of air by said air jet means is performed on the outer peripheral surface of said intermediate cylinder in a range of 45 degrees, measured downward from a position where said sheet is received by said intermediate

cylinder, with a rotation axis of said intermediate cylinder as center.

[c8] 8.The sheet-fed press as set forth in claim 6 wherein: a reverse-side printing unit and an obverse-side printing unit are arranged along a traveling path for said sheet; said reverse-side printing unit is operative to perform printing on the under side of said sheet being traveled; said obverse-side printing unit is operative to perform printing on the upper side of said sheet being traveled; and
said intermediate cylinder is used between said reverse-side printing unit and said obverse-side printing unit.

[c9] 9.The sheet-fed press as set forth in claim 8, wherein said reverse-side printing unit and said obverse-side printing unit are arranged from the upstream side of the sheet traveling direction in the recited order.

[c10] 10.The sheet-fed press as set forth in claim 9, further comprising imaging means provided under said intermediate cylinder, said imaging means being operative to photograph the reverse side of said sheet to inspect printing quality of said reverse side.

[c11] 11.A sheet-fed press including an intermediate cylinder to convey a sheet, said intermediate cylinder comprising:

a main body;

a plurality of suction boxes formed in said main body at positions different with respect to a rotation axis of said main body;

a plurality of suction bores formed in said suction boxes so that they are open at an outer peripheral surface of said main body;

suction pump to generate suction force within said suction boxes;

switching valve to switch connections between said plurality of suction boxes and said suction pump selectively; and

air shower to jet air toward an outer peripheral surface of said intermediate cylinder so that said sheet delivered to said intermediate cylinder is stretched along said outer peripheral surface.